The Future of Historical Family Demography

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Abstract

An explosion of new data sources describing historical family composition is opening unprecedented opportunities for discovery and analysis. The new data will allow comparative multilevel analysis of spatial patterns and will support studies of the transformation of living arrangements over the past 200 years. Using measurement methods that assess family choices at the individual level and analytic strategies that assess variations across space and time, we can dissect the decline of patriarchal family forms in the developed world and place Northwest Europe and North America in global comparative context.

INTRODUCTION

This is an extraordinary moment for historical family demography. We are in the midst of an explosion of new data resources that are opening unprecedented opportunities for discovery and analysis. This review explores the implications of the new data sources for the study of the composition of households, families, and kin groups.[1] I have three main arguments:

- We should use demographically appropriate measures. To make big comparisons and analyze household and family composition across time and space, we must use the best available methods and be sensitive to the effects of variation in both population composition and the availability of kin. This means that we should avoid common measures currently in widespread use.

- We should study spatial variation in families and households. Historical research on the demography of households and families has focused on analysis of small communities. One of the rationales for the community approach has been that local conditions have a powerful influence on residence decisions. In fact, I argue, the only way we can evaluate the impact of local conditions on household and family structure is to conduct multilevel analyses that assess the characteristics of many communities simultaneously.

- We should study long-run historical change. Most historical studies of living arrangements focus on a single

moment or a brief period between the seventeenth and the nineteenth centuries. This chronological focus misses the main action. The transformative changes in the family—such as the decline of intergenerational coresidence, the rise of marital instability, and the increase of single-parent families—occurred after the mid-nineteenth century.

I begin by describing the new data resources that have recently been released or will soon become available. I then provide an overview of the origins of historical family demography and describe the ways that the new data can allow us to break free from limiting debates and methods of the past. Finally, I comment on some of the broad theoretical issues facing the field.

NEW DATA

For the past half-century, the great bulk of historical studies of families and households relied on small data sets laboriously gathered by individual scholars to describe particular communities in the eighteenth or nineteenth century. The data sets were usually proprietary and were rarely made public.

Recent large-scale international collaborations have provided scholars with access to hundreds of millions of records from dozens of data sets, and new projects now under way are poised to disseminate an avalanche of new historical data in the coming years. These initiatives are designed to maximize comparability across time and space, and they are conceived as shared resources for the research community. The new initiatives are listed in **Table 1**.

Integrated Public Use Microdata Series

The Integrated Public Use Microdata Series (IPUMS) was conceived in 1991 as a method for making heterogeneous US Census data sets for the period since 1850 easily interoperable, thereby simplifying analysis of historical change. In 1999, IPUMS began to expand

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[1]In accordance with United Nations (2001) definitions, I use the term household to mean a person or group of people who live together and make common provision for food or other essentials for living, and family to mean a group of people residing in the same household who recognize a kin relationship, ordinarily through descent, marriage, or adoption. I use the term kin group to refer to the broader group of persons recognized as kin, regardless of living arrangements. Following Cherlin (2003), I define family demography as the study of (*a*) the configuration of families, households, and kin groups, and (*b*) transitions that affect those configurations. Such transitions include departure from a parental home, marriage, marital dissolution, and cohabitation.

Table 1   Major new historical data infrastructure projects

International		
IPUMS	Integrated Public Use Microdata Series	**http://www.ipums.org**
NAPP	North Atlantic Population Project	**http://www.nappdata.org**
IDS/EHPS-Net	European Historical Population Samples Network	**http://www.iisg.nl/hsn/news/ehps-net.php**
Mosaic	Recovering Historical Census Records	**http://www.censusmosaic.org**
National		
CMGPD	China Multi-Generational Panel Dataset	**http://www.icpsr.umich.edu/icpsrweb/CMGPD/**
HPR	Norwegian Historical Population Registers	**http://www.rhd.uit.no/nhdc/hpr.html**
POPLINK	Swedish Historical Population Registers	**http://www.ddb.umu.se/databaser/poplink/**
CCRI	Canadian Century Research Infrastructure	**http://www.canada.uottawa.ca/ccri/CCRI/index.htm**
I-CeM	Integrated Census Microdata (I-CeM) Project	**http://www.essex.ac.uk/history/research/ICeM/default.aspx**

beyond US borders, and today the project partners with the national statistical agencies of over 100 countries to disseminate census and survey microdata for the period since 1960. IPUMS is the world's largest demographic microdata collection; it is currently disseminating over 800 million cases of integrated microdata drawn from more than 750 censuses and surveys (IPUMS 2011). Over the next five years, the database is scheduled to double in size (Sobek et al. 2011).

The North Atlantic Population Project

The North Atlantic Population Project (NAPP) is a collaboration of researchers in Britain, Canada, Iceland, Norway, Sweden, and the United States to make a harmonized database of nineteenth-century census enumerations (NAPP 2011). Most of the NAPP data sets are not samples, but rather include entire national populations. In addition to disseminating cross-sectional microdata, the partnership is exploiting data-mining technology to develop representative linked samples with multiple observations in individuals, families, and households (Goeken et al. 2011). A new phase of the NAPP project is now being launched, with an expansive interpretation of the term "North Atlantic": New NAPP partners include Albania, Denmark, Germany,

Egypt, Ireland, and Mexico. All 12 partners will contribute new data sets, so by 2016 the project will include 64 censuses taken between 1787 and 1930 describing the living arrangements of approximately 365 million persons (Ruggles et al. 2011). For 90% of these cases, the IPUMS project will provide comparable data pertaining to the period since 1960. To make long-run comparisons easy—and to help ensure the long-run sustainability—the NAPP database is being incorporated into the IPUMS infrastructure.

Intermediate Data Structure

Historical demographers have created a variety of large-scale longitudinal databases constructed by linking information from population registers, genealogies, or church records to provide continuous information on historical life courses. Among the most prominent are the Demographic Data Base (Umeå University), the Scanian Demographic Database (Lund University), the Balzac Population Register (Quebec), the Utah Population Database, the Enquête TRA (France), and the Historical Sample of the Netherlands. Many of these databases provide direct measures of household composition, and they all include information of crucial importance for historical family demography. The creators of these data

collections have sometimes tried to share them with outside researchers, but owing to the complexity of the data, access is cumbersome and usage of each database is concentrated among its producers.

The Intermediate Data Structure (IDS) is an ambitious collaboration among the world's major producers of longitudinal historical databases. The goal is to open access to the collections and to make them interoperable. The project involves converting about 15 longitudinal databases into a common structure with common metadata and disseminating them through a sophisticated Web-based data access tool that will produce customized files specialized for analysis of particular topics, such as fertility or household transitions (Alter et al. 2009). The consortium plans to release a preliminary version of the data access tools with contributions from four databases by the end of 2012 and to add six more databases in the following year (EHPS-Net 2011). A complete system with the full roster of participating data collections is planned to be complete by 2016.

The Mosaic Project

A new collaboration of researchers from most European countries aims to assemble thousands of census and census-like listings for local communities in the past (Mosaic 2011). In most European countries, the enumeration forms for national censuses taken before the mid-twentieth century were not preserved; accordingly, complete microdata collections and national samples like those in NAPP and IPUMS are not possible. In virtually every country, however, census manuscripts or census-like listings known as *libri status animarum* survive in scattered archives. Historical demographers have already digitized a great deal of these data to support community-level studies. The Mosaic Project will gather existing machine-readable microdata and harmonize it according to IPUMS and NAPP standards, identify gaps in the collection and locate sources to fill them, and coordinate digital conversion for the new additions. The first data

release in August 2011 provided 10 data sets from 7 countries with 315,000 observations, and collaborators have already pledged to contribute dozens of additional files. Over the next decade, Mosaic organizers hope to expand the collection to cover 40 countries with millions of observations spanning five centuries.

National Projects

The explosion of new data is not limited to these four international collaborations. Within specific countries, various additional large-scale historical data projects have either recently been completed or are now under way. Space limits preclude a full listing of these initiatives, but a few examples can illustrate their extraordinary scale and scope.

- The China Multi-Generational Panel Dataset, released in 2010, provides individual and household longitudinal data for 260,000 persons in Liaoning province between 1749 and 1909 (Lee & Campbell 2011); the database will soon be expanded with records from Shuangcheng.

- Separate initiatives in Norway (Norwegian Historical Data Centre 2011) and Sweden (POPLINK 2011) are bridging the gap between modern population registers and existing historical databases by digitizing records from the twentieth century, providing continuous series of longitudinal data from the early nineteenth century to the present.

- The Canadian Century Research Infrastructure (Sager & Baskerville 2010) will fill the gap between nineteenth-century data sets available through NAPP and twentieth-century files disseminated through IPUMS by creating large samples of the censuses of 1911, 1921, 1931, 1941, and 1951.

- The Integrated Census Microdata Project (I-CeM 2011) will provide complete microdata for every census of England, Wales, and Scotland between 1841 and 1911—a total of about 210 million records.

There are still gaps. Pre–twentieth century data for most of the developing world remain scarce. There are no substantial public data sets describing family and household composition in sub-Saharan Africa or South Asia before 1960, and only limited data are available for Japan, Korea, and Latin America. Nevertheless, for the first time researchers can freely access a vast body of records describing historical family and household composition across thousands of places and long time spans. In just a few years, the total available historical microdata will exceed a billion records. To capitalize on the new resources, we must make significant changes in the style of research that has become standard over the past five decades.

LE PLAY, LASLETT, AND THE ORIGINS OF HISTORICAL FAMILY DEMOGRAPHY

The first systematic investigation of change in the configuration of families was conducted by the reactionary mid-nineteenth century social scientist Frédéric Le Play (1855, 1871, 1872). Le Play gathered case studies describing individual families across Europe and Western Asia and concluded that there were just three family systems found at all times and places: the joint family (*famille patriarcale*), the stem family (*famille souche*), and the nuclear family (*famille instable*). Le Play's family types have had extraordinary influence on sociological thought, and they continue to overshadow debate and discussion among historical family demographers.

Joint families and stem families are both multigenerational. In joint families, "parents always retain near them all their married sons, and the children issuing from such marriages," whereas in stem families, "the father transmits his fireside and place of labor to that one of his children which he thinks most capable," and sends the other children out into the world (Le Play 1872, pp. 40–41). Le Play observed joint families mainly in Eastern Europe, and argued that stem families predominated in many parts of Western Europe, including parts of France.

The nuclear families Le Play identified were mainly located in England and the manufacturing districts of Western Europe. There, "the young adults leave their parental firesides as soon as they gain any confidence in themselves" (Le Play 1872, p. 41). The result was disastrous: "the parents are isolated in their old age and die abandoned" (Le Play 1871, p. 9).

Stem families, Le Play believed, were ideal. They offered greater flexibility than joint families without the instability of nuclear families. Accordingly, Le Play was alarmed by what he saw as a gradual shift from stem families to nuclear families. In part, he blamed Napoleonic inheritance law, which mandated equal division of property among all heirs, eliminating the power of the patriarch to designate his successor. At the root, however, he saw the changing organization of labor as a fundamental threat to the stem family. For the stem family to succeed, the patriarch must be the proprietor of the family farm or workshop. With the rise of large commercial and manufacturing populations, the tie between work and family was severed, and the stem family was undermined. In these circumstances, the younger generation was vulnerable to the lure of high wages and the "attractions of city life" (Le Play 1872, p. 79).

Subsequent observers built on Le Play's research. Devas (1886) wrote that joint families were common in China and India and could also be found in Southeastern Europe and Central Italy but concurred with Le Play that in places such as modern France, England, and North America, the diminished "power of the father over his children" had led to "rapid dissolution" of multigenerational families (Devas 1886, pp. 44, 211). Durkheim (1888) introduced the idea that with the growth of social differentiation, specialized functions of the family were lost and kin ties were weakened (Lamanna 2002). By the mid-twentieth century, sociologists agreed that industrialization and modernization had reduced the functions of the family; turning Le Play's interpretation on its head, many concluded that flexible and mobile nuclear families were ideally adapted to the needs of modern industrial

society (Ogburn 1933; Parsons 1944, 1955). Goode (1963, p. 6), reflecting this consensus, wrote that "wherever the economic system expands through industrialization . . . extended kinship ties weaken, lineage patterns dissolve, and a trend toward some form of the conjugal system generally begins to appear."

Before the mid-twentieth century, theorizing about family change took place without the benefit of statistical evidence. Le Play's case studies belong to a prestatistical era; he carefully selected particular families for analysis because he felt they were typical. The British Census of 1931 and the US Census of 1930 produced the first national tabulations of household composition, but the classifications were rudimentary and in the US case they were not published until 1940 (Nixon 1952, Glick 1941). From the 1940s onward, however, family and household statistics from censuses and surveys became more and more abundant and detailed, and the subfield of family demography emerged to track the rapid transformations of the postwar era (Glick 1988).

Statistical research on the configuration of families and households in earlier times began in the 1960s. While on sabbatical at the Library of Congress in 1959, English historian Peter Laslett stumbled on a reproduction of two census-like listings of the 400-odd inhabitants of the village of Clayworth, in Nottinghamshire, one taken in 1676 and the other in 1693 (Schürer 2003). The population was divided into small units—presumed to be households—and within each unit the family relationships were given. Laslett had expected to find that households in preindustrial England were typically large and complex, filled with "grandfathers, aunts and uncles sitting round the cottage fire with grandchildren, cousins and second cousins all under the mastership of the patriarchal head" (Laslett 1970, p. 87). As he examined the households, Laslett was shocked to find that they were generally small, and just 1 in 10 units included kin other than the household head, his wife, and their children (Laslett 1965).

Over the next few years, Laslett assembled an army of volunteers to comb through the parish records of England in search of similar listings. They found census-like listings for 100 English villages between 1574 and 1821, and an average of just 10.1% included extended kin (Laslett 1969). This figure was virtually identical with the percentage of households containing extended kin in the 1961 census of England and Wales (General Register Office 1968). The interpretation was clear: Family structure had been extraordinarily stable over four centuries. There was no shift from extended to nuclear families with industrialization; the English family had always been overwhelmingly nuclear.

In 1969, Laslett held a conference at the newly formed Cambridge Group for the History of Population and Social Structure to discuss the new findings and place them in broader context. He invited scholars from Europe and the United States who were working on historical family structure, and in advance of the meeting he circulated his paper describing families in the 100 English communities. Participants contributed essays on the United States, several European countries, and Japan. When the conference volume was published under the title *Household and Family in Past Time* (HFPT), it was a bombshell. Laslett concluded that family organization was "always and invariably nuclear" (Laslett & Wall 1972). This idea resonated powerfully among sociologists, many of whom had already been questioning the connection between industrialization and nuclear family structure (Greenfield 1961, Litwak 1960, Sussman 1959).

The same year that Laslett's findings about Clayworth first became widely known, Hajnal (1965) published a landmark essay arguing that Northwest Europe from the seventeenth to the nineteenth centuries had a distinctive pattern of late marriage and a high percentage of people who never married, compared with most of the rest of the world. Hajnal and Laslett combined their findings and concluded that early modern England, Northern France, the Low Countries, Germany, and Scandinavia had an unusual family formation system of nuclear families, late marriage, and high domestic service (Hajnal 1982, Laslett 1982). Hajnal's Northwest

European family system is regarded by some scholars as an essential condition for the development of early modern capitalism and the industrial revolution (Macfarlane 1986, 1987; Cain & McNicoll 1988; Hartman 2004). This is a radical departure from the structural theories of the family touted by Ogburn and Parsons: According to the new interpretation, the nuclear family was not a consequence of industrialization but rather its cause.

Laslett opened HFPT with an 89-page introduction that was partly manifesto and partly a detailed set of instructions about how to conduct research on the history of families and households, including an elaborate system of household classification. This guidebook has had great success: Hundreds of studies of communities all over the world have been conducted using Laslett's approach and his household classification scheme. Not all of these have endorsed Laslett's interpretation. Regardless of whether they endorse or criticize Laslett's ideas, however, most studies in historical family demography have followed the basic template for research he introduced in HFPT. This model of research has three basic characteristics: (*a*) It uses methods and measures derived from Laslett's cookbook, (*b*) it focuses on a single community or a few nearby communities, and (*c*) it analyzes data from a relatively brief period that occurred before the twentieth century.

MEASUREMENT

In 2009, Switzerland and Papua New Guinea had an identical crude death rate of 8 deaths per 1,000 persons. Among other nations, the death rate per 1,000 was 3 in Syria, 5 in Nicaragua, 9 in Japan, and 10 in Sweden (World Bank 2011).

There are good reasons demographers do not use crude death rates to make comparisons across countries with differing age composition: The results are invariably misleading. Laslett's finding that the percentage of nuclear households in England was unchanged over the centuries was technically correct, just as it is technically correct that Switzerland and

Papua New Guinea had the same death rate in 2009. But neither of these comparisons is meaningful.

Like deaths, living arrangements are highly sensitive to age. Controlling for age is thus essential whenever making comparisons of household composition across populations. But age structure is not the sole comparability issue; demographic conditions also affect family composition by determining the availability of kin for coresidence. One cannot, for example, reside with a parent if both of one's parents have died. The particular configuration of kin available for coresidence in a population is a direct function of the prevailing levels and timing of fertility and mortality.

As soon as Laslett first published his finding that there were few extended families in preindustrial England, Glass (1966) and Wrigley (1969) developed simple analytic models suggesting that preindustrial demographic conditions posed substantial demographic constraints on the potential for multigenerational families. Berkner (1972) argued eloquently that Laslett's cross-sectional data were incapable of detecting Le Play's stem family, which describes a process of inheritance and family succession, not the configuration of families at a particular moment in time.

We now know that Berkner was correct: Laslett's classification cannot detect Le Play's stem families. The proof was recently supplied by Wall (2009), Laslett's longtime collaborator. Wall examined the case studies of individual families that Le Play compiled in the mid-nineteenth century, and he classified them according to Laslett's system. Among Le Play's stem families, Wall classified 81% as simple families under the Laslett scheme. At the moment of Le Play's interview, those families consisted only of parents and their children. Le Play nevertheless considered them stem families because of their system of family succession: One child was designated as the heir and would remain in the home after marriage.

In nineteenth-century Northwest Europe, marriage occurred late and death occurred early, so the period of overlap between marriage

and the death of parents was often brief; in many cases, people died before the birth of their first grandchild. Only the brief overlapping period can be observed as a three-generational family in a census. Under stem family formation rules, the issue is compounded by fertility: Only one married child remains in the parental home, and all the others go out to form new nuclear families. Accordingly, under a stem family system the maximum observed frequency of multigenerational households is inversely proportional to the level of fertility (Ruggles 1987).

In preindustrial England, the average age at childbirth for women who survived the childbearing years was almost 35, and their husbands were generally a year or two older (Ruggles 1987). Because of the long generations, multigenerational families usually had to include an elderly person. The old, however, were thinly spread through a very young population; only about 1 in 15 persons was aged 60 or older, and 1 in 20 was 65 or older (Wrigley & Schofield 1981). The scarcity of the elderly meant that few families could

include three generations. In the twentieth century, the potential for multigenerational families increased dramatically; more than 1 in 5 persons in England and Wales is now age 60 or older, and 1 in 6 is age 65 or older.

Figure 1 illustrates the difference between a household-level approach and one based on individual-level coresidence using IPUMS census microdata for the United States between 1880 and 1950. The top line shows the percentage of persons aged 65 or older residing with children and grandchildren, and the bottom line shows the percentage of households that contained three generations. Both measures use the 1970 Census Bureau definition of households to maximize comparability (Ruggles & Brower 2003). Between 1880 and 1950, the percentage of elderly persons residing with three generations fell by more than half, but during the same period the percentage of households with three generations was nearly constant, dropping by just one percentage point.

Demographic opportunities to form three-generation households roughly doubled between 1880 and 1950, for two reasons. First, mortality declined, so more elderly parents were available for coresidence. Second and even more important, fertility declined, so the pool of available elderly parents was shared among a smaller younger generation. But the increasing opportunities for coresidence were counterbalanced by a massive decline in the proportion of people who capitalized on those opportunities, creating the illusion of stability. Thus, household-level measurement in the context of rapid demographic change masks massive changes in family decision making, just as it did when Laslett compared the percentage of extended households in preindustrial England with the Census of 1961. Measuring intergenerational coresidence from the perspective of the oldest generation minimizes the effects of variation in demographic conditions. Even in populations where few households have the potential to include three generations, most persons over the age of 65 have the demographic potential to reside with children and grandchildren.
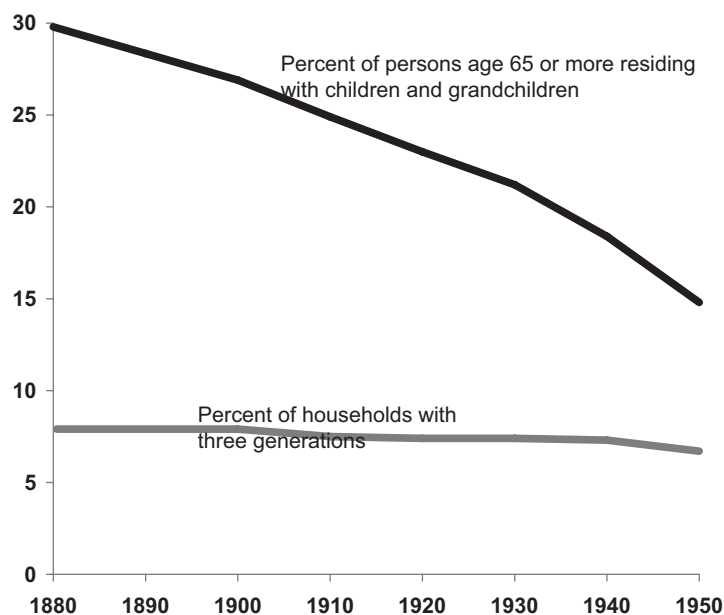
Figure 1

Measures of three-generation families in the United States, 1880–1950. Source: IPUMS (2011).

Historical studies of family structure still rely heavily on the Laslett classification. For example, among 12 quantitative studies of household composition appearing in the journal *History of the Family* during the past five years, eight used the Laslett scheme. Similarly, in a recent landmark collection on stem families (Fauve-Chamoux & Ochiai 2009), 10 of 15 quantitative analyses of household composition use the Laslett system, even though several of those studies stress its limitations.

International and cross-temporal comparisons of the percentage of households that are extended or multiple are often meaningless. Just as the crude death rates of Syria and Sweden do not reveal which country has the higher risk of mortality, the percentage of complex households tells us virtually nothing about the family system. This is not a problem specific to Laslett's classification. No household-level measurement system can control for age composition or the availability of kin. The measurement schemes and classifications proposed by Burch (1967), Hajnal (1982), Verdon (1998), and the United Nations (2001) suffer from exactly the same problems.

Demographers have developed a variety of methods to assess the effects of demographic conditions on the availability of kin (e.g., Bongaarts et al. 1987, Ruggles 1987, De Vos & Palloni 1989, Wolf 1994, Murphy 2011). If sufficient demographic information is available, microsimulation and life-table methods can provide reasonable estimates of the percentage of persons with a particular set of characteristics that had living kin of a particular type. In a few cases, historical sources provide sufficient information to measure the availability of kin directly (Post et al. 1997, Nevin 2002, Van Baelen & Matthijs 2007). But even if demographic or empirical analysis can reveal the rough magnitude of demographic constraints on the availability of kin under a particular demographic regime, they do not offer practical solutions that can be incorporated into comparative or cross-temporal analyses of family composition. The best available approach is to employ simple individual-level measures of family composition where the impact of demographic factors is straightforward and predictable. We can then introduce statistical controls for the general demographic characteristics of the population—such as fertility, age at marriage, and age structure—as well as individual-level controls for age (Ruggles 2010, Gruber & Szoltysek 2011).

In addition to allowing us to control for the effects of demographic conditions, individual-level measures of family composition have other big advantages over household-level measures. The strategy of assessing living arrangements of households as a whole in a unitary way makes it impossible to assess the impact of individual characteristics on residence decisions. This makes it difficult to study generational and gender dynamics. Household-level analysis makes life-course analysis—as opposed to a life-cycle approach—impossible (Elder 1978, Kok 2007). The conventional measures prevent us from assessing differentials in the familial experience of men and women. If we wish to analyze the residential decision making of individuals, we must adopt individual-level measures (Ruggles & Brower 2003).

If existing household-level classifications are limiting and misleading, what should we do instead? I do not have a Laslett-style cookbook, but I do have some suggestions. If the microdata for many countries are readily available in a standardized form, that reduces the necessity of standard classifications. Individual researchers can develop measures customized to particular research problems and apply them to a wide range of data sets, controlling for population composition and demographic characteristics as necessary. Family measures should follow four basic principles:

1. We should always control for age, by restricting analysis to either a specific age band, standardization, or regression.
2. We should anticipate the potential effects of demographic conditions on the availability of kin and control for them when feasible.
3. We should keep the measures simple. Complex classifications make it difficult

Table 2   Examples of individual-level family measures

Name	Numerator	Universe/denominator	Useful controls
1. Elderly with adult children	With child aged 18+	Age 65+	Age, fertility level
2. Three generation	With child or child-in-law and grandchild	Age 65+	Age, fertility level, age at marriage
3. Stem family	With ever-married child, child-in-law, or grandchild	Age 65+	Age, fertility level, age at marriage
4. Joint family	With two married children	Age 65+	Age, fertility level, age at marriage
5. Adult sons with parents	With parent	Men age 30–39	Age, fertility level
6. Children with single mother	With mother only	Age 0–18	Age
7. Mothers without spouse	Without spouse	Mothers of children age 0–18	Age
8. Unmarried fertility	With child age 0–4	Unmarried women age 14–49	Age
9. Marital instability	Separated or divorced	Women age 20–39	Age

to anticipate and control for the intervening effects of demographic conditions. Dichotomous measures identifying coresidence of specific kin types are ideal.

4. When designing measures, we should pay as much attention to denominators as to numerators; in most cases, we should restrict the analysis to a population at risk of living in a particular situation.

Table 2 provides examples of cross-sectional measures that adhere to these principles. The first five measures focus on intergenerational coresidence, which is especially sensitive to demographic conditions. Most of these intergenerational measures focus on the population aged 65 or older, an age at which most people in all populations have grown children with whom they could reside. Coresidence decisions, however, depend not only on the characteristics of the older generation, but also on the characteristics of the younger generation. Measure 5 is designed to assess the effects of occupational status on coresidence with parents and focuses on men aged 30–39. It is limited to men because occupation is a poor indicator of socioeconomic status for women before the late twentieth century. I define the younger generation as 30 to 39 because those

ages are beyond the usual ages of leaving home and yet are young enough that even in the nineteenth century about half still had a surviving parent with whom they could potentially reside (Ruggles 1994). Measure 5 is highly sensitive to fertility and mortality, so unadjusted trends in the absolute level of coresidence could be highly misleading, but comparison of socioeconomic differentials is less problematic.

The remaining measures are straightforward. Measure 6 focuses on the experience of children; it is appropriate for analyzing the impact of single parenthood, but it is not ideal for assessing residence decisions given that children rarely decide where to live. Measure 7 assesses lone motherhood relative to all mothers, and measure 8 is a simple indicator of unmarried fertility. Marital instability, measure 9, is an indicator of prevalence, so it reflects the combined effects of past divorce, separation, and remarriage; with a few exceptions, one cannot measure divorce rates with cross-sectional data, but the prevalence measure is an effective indicator of the level of marital instability that maximizes comparability across time and space (Heggeness 2010).

The demographic controls listed in the right-hand column can either be individual-level variables or contextual variables measured

at the local, regional, or national levels. Age should always be controlled at the individual level, but it is also useful to add contextual controls for age structure of the population because for many measures age distribution is closely associated with the availability of kin. For example, when comparing measure 5 across populations, one can include an independent variable controlling for the percentage of the population aged 65 or older. That indicator is closely correlated with the availability of parents for men in their thirties and provides a simple and effective way to account for the differential availability of kin. We often lack good mortality data, especially at the local level, so controlling for population age structure as well as individual-level age is a useful substitute. With cross-sectional data, fertility and age at marriage can occasionally be controlled at the individual-level but almost always can be controlled at the population level.

None of these measures depends upon headship; they are strictly configurations of kin sharing a household. Headship is critical to analysis of living arrangements, but we should not conflate family composition and headship. Many studies use the percentage of female-headed households as a measure of lone motherhood, but as Heggeness (2010) demonstrated, that measure misses up to half of lone mothers in some populations. Analysis of headship is critical but should be distinguished from analysis of composition. Thus, for example, it makes much more sense to assess the percentage of lone mothers heading households than to assess the percentage of households headed by lone mothers.

Crude household-level measurement created the illusion that the Northwest European family was unchanged across multiple centuries, and this misunderstanding dominated the literature for decades. It is not appropriate to use any household-type classification for analysis of trends or differentials in living arrangements. Instead, we should adopt well-designed individual-level measures, control for age structure, and be sensitive to the potential impact of kin availability.

SPACE AND TIME

Ever since Le Play, geography has been a central preoccupation of historical family demography. A significant literature has focused on the spatial distribution of joint families (Wheaton 1975), which have been identified in Russia (Czap 1982), Southeastern Europe (Kaser 1994), and parts of Italy (Kertzer 1989). Historical family demographers have also devoted substantial effort to refining the boundaries of the Northwest European nuclear family region identified by Laslett and Hajnal (e.g., Plakans & Wetherell 2005, Szoltysek 2009), and many investigators have questioned the premise that stem families were absent from Northwest Europe and North America. They point to evidence of stem families in nineteenth-century England (Ruggles 1987), Ireland (Gibbon & Curtin 1978), Finland (Moring 2009), France (Fauve-Chamoux 1984), Norway (Sogner 2009, Jåstad 2011), and the United States (Ruggles 1994).

Despite decades of debate about the geography of historical family and household composition, however, there has been little spatial analysis. The vast majority of quantitative evidence on family and household composition has consisted of studies of a single community or a small group of communities. When different investigators analyze different communities, comparability problems arise. The authors each use their own computer programs for manipulating and classifying their data and the results are not always comparable from one author to another. Moreover, when data from different places are analyzed separately, no statistical analysis of spatial variation can be undertaken.

Since the publication of Laslett's original conference volume, comparison has been accomplished by publishing volumes of collected essays, each pertaining to a different place and analyzed by a different author. Fauve-Chamoux & Ochiai (2009) includes studies of stem families in more than a dozen historical populations of Europe and Asia. Among the 20 essays in the massive volume, most analyze either a single locality or two or three communities within a

local area. There are three exceptions that offer international comparisons, but even these offer only basic descriptive statistics that compare a small number of communities.

One of the main rationales for community studies is to uncover the impact of local conditions on family composition. It is impossible, however, to empirically establish a relationship between conditions and family composition if the N is 1; one must have data from many communities to assess variation in conditions and behavior. Not infrequently, investigators compare communities with different characteristics. For example, in a recent article Breschi et al. (2009) analyze the impact of agricultural regimes on family complexity and remarriage of widows. Although the study is fascinating and suggestive, it is ultimately inconclusive because it is based on just three observations.

To statistically exploit the comparative strategy through spatial analysis, we need information about many places. The new data sources give us detailed information about tens of thousands of communities. They also provide information at the level of individuals, households, neighborhoods, provinces, and countries, allowing true multilevel analysis. A systematic approach to spatial analysis incorporating multiple indicators of the characteristics of places can provide powerful new tools with the potential to transform the field (Gutmann et al. 2011).

It is equally important that we exploit the new potential to assess change over broad spans of time. The families of the developed world have been transformed over the past two centuries. In the mid-nineteenth century, elderly people ordinarily lived with their children, divorce was exceedingly rare, and births to unmarried women were infrequent. Today, the great majority of the elderly in most developed countries reside alone or with a spouse, divorce has gone up as much as 50-fold, and in a few countries most babies are born to unmarried mothers.

The magnitude of family change has been just as dramatic as the more famous transitions of fertility and mortality. In the United States,

for example, the percent of elderly residing with adult children dropped 80% from 1850 to 1990, and marital instability increased 500% (Ruggles 1997, 2007). By comparison, during the same period fertility declined by 65% and life expectancy doubled (Carter et al. 2006). But although the fertility and mortality transitions have been intensively studied, there has been comparatively little research on the family transition.

Time is curiously absent from much historical family demography. Most studies focus on specific communities at a particular moment or over a brief period. They sometimes study the effects of short-run economic, demographic, or political events on families but less often examine secular trends. Among a dozen quantitative analyses of household structure published in the journal *History of the Family* during the past five years, only one-third looked at long-run change.

The greatest period of change in the family was the twentieth century. The United States is presently the only country with a continuous series of microdata spanning the twentieth century; as a consequence, there has been an explosion of studies of long-run family change in the United States. Dozens of investigators have explored a wide range of topics, including marital disruption (Cvrcek 2011), transitions to adulthood (Fussell & Furstenberg 2005), the racial crossover in family complexity (Goldscheider & Bures 2003), the living arrangements of children and the decline in coresidential support for young mothers (Tolnay 2004, Short et al. 2006), living arrangements of the elderly (Costa 1999, Gratton & Gutmann 2010), the rise of cohabitation and interracial marriage (Rosenfeld 2006), and the impact of home ownership on family structure (Collins & Margo 2004).

Within the next few years, we will have comparable microdata for both the pre-1920 period and the post-1960 period in eight or nine developed countries. The period between 1920 and 1960—a period of especially rapid family change in Europe and North America—poses greater challenges. In many countries, the microlevel source materials from this period have

been lost, and confidentiality restrictions generally limit access to the sources. As described above, however, a Canadian census data series is nearing completion, and population register projects under way in Norway, Sweden, and the Netherlands promise to make continuous family data available for the entire century. In the developing world, there are few publically accessible microdata describing families before the 1960s, but there will be several significant additions in the next few years. Moreover, in many developing countries rapid family change first began in the late twentieth century, a time for which data resources are becoming abundant.

INVESTIGATING THE FAMILY TRANSITION

Intergenerational coresidence in North America and Northwest Europe began to drop in the nineteenth century, and the change accelerated in the twentieth century (Ruggles 2009, 2010). This shift is just one facet of a broader transformation of family behavior. In each country, marital stability began to erode around 1900 (Goode 1963). Over the course of the twentieth century, Northwest Europe and North America saw remarkable increases in lone parenthood, solitary residence, nonmarital fertility, and cohabitation (Cherlin 1992, Sobotka & Toulemon 2008). Taken together, this set of changes represents a transition in family composition with consequences as profound and far-reaching as the demographic transition of mortality and fertility.

Ideational theorists argue that family changes reflect the erosion of traditional norms about appropriate family behavior (Lesthaeghe 1983). The rise of individualism and secularization, they argue, led to shifts in the moral code that allowed the major changes in family behavior. At one level, the ideational interpretation is obviously correct: Current family behavior would have been prohibited by nineteenth-century social mores, and the family transition could never have happened without an ideational shift. In the writing of most

theorists, however, the source of ideational change is unclear. The new norms and values seem have a life of their own, and they spread and develop autonomously and on their own schedule; they are disconnected from the massive structural changes that have transformed and are continuing to transform the world.

The transformation of family composition coincided with declining authority of family patriarchs. Before the mid-nineteenth century, European and North American families were firmly controlled by the household head, who had the right to command the obedience of his wife and children and to use corporal punishment to correct insubordination (Siegel 1996, pp. 2122–23). In the second half of the nineteenth century, legal restrictions on wife beating began to appear in Sweden, the United States, and Britain, and in several countries married women acquired limited property rights (Calvert 1974, Emerton et al. 2005). In the twentieth century, patriarchal authority diminished to the point that the very concept of "Household Head" became obsolete; in 1980, the US Census Bureau abandoned the concept to avoid offending respondents, and over the following two decades most European census authorities followed suit (Ruggles & Brower 2003, Minnesota Population Center 2011).

I am persuaded that both the changes in family structure and the decline of patriarchal ideology are related to the massive structural changes of the Industrial Revolution, which transformed production and led to a tenfold increase of per capita real income (Lindert 2004). In the early nineteenth century, household heads controlled the means of subsistence, and residence decisions reflected the unequal distribution of power. It was typically worth it for adult sons to obey their fathers; they often had no attractive alternatives. There were few employment opportunities available other than farm service; the prospect of inheriting the farm or workshop was typically their best option. The lack of alternatives also reinforced patriarchal gender relationships. Wives submitted to the authority of their husbands or fathers partly because they had no other way to subsist.

Across Northwest Europe and North America, wage labor opportunities emerged in the nineteenth century. In the United States in 1800, only 17% of men worked outside of farming; in 1900, 65% did so (Ruggles 2007). In Norway, the percentage of adult men in commercial and industrial occupations rose from 13% to 42% over the course of the century (NAPP 2011). As more and better-paid wage labor opportunities emerged, the incentive for sons to obey their fathers diminished.

New opportunities also arose for women to work outside of the family economy and outside the control of husbands and fathers. In both Norway and the United States, for example, the percentage of women employed in wage labor jobs other than domestic service doubled during the last three decades of the nineteenth century (NAPP 2011). In places where job opportunities for women appeared, they created a path to live independently and to escape from abusive marriages. In the United States, there was a remarkably consistent geographic association between the opening of female wage labor opportunities and the rise of marital instability from 1880 to 1990 (Ruggles 1997).

The structural theories of family change that prevailed from Durkheim to Parsons minimized the importance of incentives and constraints faced by individuals. According to these interpretations, increasing social differentiation and new social institutions led families to spontaneously shed their functions and simplify their structures to fit the needs of modern industrial society (Lamanna 2002, Parsons 1955). Today, such theories seem teleological. Even if we reject functionalist explanations of change, however, the impact of structural factors on the family should not be understated. The changing configuration of the family was made possible by a shift in the balance of power within the family created by the opening of economic opportunity. Individuals made decisions about whether to stay with families or to leave; when wage labor opportunities arose, children and wives had a path to escape patriarchal discipline. But to take advantage of that path, they had to be willing to defy authority.

To investigate the reasons for the breakup of the traditional patriarchal household, it is useful to think about incentives and constraints at the individual level, not the household level. Coale's (1973) formulation of the preconditions for fertility decline is instructive for the family transition as well. Coale identified three essential prerequisites for fertility limitation: (*a*) It must be within the "calculus of conscious choice," (*b*) it must be advantageous, and (*c*) effective techniques must be available.

We need to investigate all three of Coale's conditions for change. Using vast new data resources, measurement methods that assess family choices at the individual level, and analytic strategies that assess variations across space and time, we can begin to dissect the transformation of the family. We will soon finally have the data needed to draw a reliable map of family patterns in Europe before industrialization and to trace the chronology of associations between family change and measures of secularization. We can directly compare the family transition to the fertility transition at the levels of households, communities, and regions. New longitudinal data will help us evaluate the material incentives for residence transitions at the individual level in a comparative framework. Complete-count microdata will allow multilevel analysis of the impact of economic opportunity on the family options available to individuals.

The new historical data will also allow us to place Northwest Europe and North America in broad comparative context. There are increasing signs that the family transition may be global in scope. In recent decades, there has been dramatic family change in Eastern and Southern Europe (Lesthaeghe 2009). The developed countries of East Asia have also seen a sharp decline in intergenerational coresidence, a substantial rise of divorce, increased cohabitation, and declining marriage (Chattopadhyay & Marsh 1999, Lee 2006, Raymo et al. 2009, United Nations 2005). Family patterns in developing countries are less clear. Marital instability is increasing in much of the developing world (Heggeness 2010). There is some evidence of a drop in intergenerational families,

but there are also conflicting data, and patriarchal authority remains strong in most countries (Palloni 2001, Ruggles & Heggeness 2008).

It is too early to declare that convergence theorists were correct all along and that the entire world will eventually come to resemble the West. As evidence of family change around the world accumulates, however, theories of the indelibility of family norms and values (e.g., Therborn 2004) are beginning to lose ground. The question of convergence, however, is inherently a historical one. By empirically describing sequences of change across time and space, we can evaluate theory and provide historical context for understanding the ongoing transformation of family demography.

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